

IN THE CLAIMS

1-6. (Canceled)

7. (Previously Presented) A method of forming an individually patterned layer in a plurality of regions of a substrate, comprising the steps of:

disposing between said substrate and a layer material source a mask having a smaller area than said substrate and including an opening corresponding to one or more of the plurality of regions where said layer is formed;

causing a material from said layer material source to attach to a first region of said substrate through said opening, while relative positions of said substrate, said mask, and said layer material source are set to a first positional relationship;

causing relative movement between said mask and said layer material source, and said substrate to change relative positions of said substrate, said mask, and said layer material source from said first positional relationship to a second positional relationship; and

causing said material to attach to a second region of said substrate through said opening, while relative positions of said substrate, said mask, and said layer material source are set to said second positional relationship.

8-18. (Canceled)

YKI-0078  
09/966,692

19. (Previously Presented) A manufacturing method of a color emissive device including, on a substrate, a self-emissive element having a first electrode, an emissive material layer for each color, and a second electrode, for each of a plurality of pixels, said method comprising the steps of:

disposing between said substrate and an emissive material source a mask including an opening at a position corresponding to a region for forming the emissive material layer of one or more of said plurality of pixels of said substrate, and having a smaller area than said substrate to cover one or more of said plurality of pixels on said substrate; and

causing an emissive material from said emissive material source to attach to a first region of said substrate through said mask, while relative positions of said substrate, said mask, and said layer material source are set to a first positional relationship;

sliding a relative position between said mask, said emissive material source, and said substrate by a predetermined pitch corresponding to a size of the pixel of said substrate to change relative positions of said substrate, said mask, and said layer material source from said first positional relationship to a second positional relationship;

causing said emissive material to attach to a second region of said substrate through said opening, while relative positions of said substrate, said mask, and said layer material source are set to said second positional relationship.

20. (Original) A manufacturing method of a color emissive device according to claim 19, wherein

said substrate is slid in two directions of said substrate perpendicular to each other by a pitch corresponding to an arrangement of said pixels for a same color.

21. (Original) A manufacturing method of a color emissive device according to claim 19, wherein

said substrate is slid in one direction of said substrate by a pitch corresponding to an arrangement of said pixels for a same color.

YKI-0078  
09/966,692

22. (Original) A manufacturing method of a color emissive device according to claim 19, wherein

said emissive material source is a linearly extending source elongated in a direction perpendicular to a direction of the relative movement between said mask and said emissive material source, and said substrate.

23. (Original) A manufacturing method of a color emissive device according to claim 22, wherein

said linearly extending source is formed by a plurality of emissive material sources arranged adjacent to each other.

24. (Original) A manufacturing method of a color emissive device according to claim 19, wherein

a semiconductor material is used for said mask.

25-29. (Canceled)

30. (Previously Presented) A manufacturing method of a color emissive device according to claim 19, further comprising forming said material scattered from said layer source on said substrate through said opening of said mask into a layer having a pattern according to a shape of said opening.

31. (Canceled)

YKI-0078  
09/966,692

32. (Previously Presented) A method of forming an individually patterned layer in a plurality of regions of a substrate, comprising the steps of:

disposing between said substrate and a layer material source a mask having a smaller area than said substrate and including an opening corresponding to one or more of the plurality of regions where said layer is formed;

causing a material from said layer material source to attach to a first region of said substrate through said opening, while relative positions of at least said substrate and said mask are set to a first positional relationship;

causing relative movement between at least said mask and said substrate to change relative positions of at least said substrate and said mask from said first positional relationship to a second positional relationship; and

causing said material to attach to a second region of said substrate through said opening, while relative positions of at least said substrate and said mask are set to said second positional relationship.

33. (Canceled)

YKI-0078  
09/966,692

34. (Previously Presented) A manufacturing method of a color emissive device including, on a substrate, a self-emissive element having a first electrode, an emissive material layer for each color, and a second electrode, for each of a plurality of pixels, said method comprising the steps of:

disposing between said substrate and an emissive material source a mask including an opening at a position corresponding to a region for forming the emissive material layer of one or more of said plurality of pixels of said substrate, and having a smaller area than said substrate to cover one or more of said plurality of pixels on said substrate; and

causing an emissive material from said emissive material source to attach to a first region of said substrate through said mask, while relative positions of at least said substrate and said mask are set to a first positional relationship;

sliding a relative position of at least said mask and said substrate by a predetermined pitch corresponding to a size of the pixel of said substrate to change relative positions of at least said substrate and said mask from said first positional relationship to a second positional relationship;

causing said emissive material to attach to a second region of said substrate through said opening, while relative positions of at least said substrate and said mask are set to said second positional relationship.

YKI-0078  
09/966,692

35. (New) A method of forming an individually patterned layer in a plurality of regions of a substrate, comprising the steps of:

disposing between said substrate and a layer material source a mask including an opening corresponding to one or more of said plurality of regions where said layer is formed;

causing a material from said layer material source to attach to a first region of said substrate through said opening, while relative positions of said substrate, said mask, and said layer material source are set to a first positional relationship;

causing relative movement between said mask, said layer material source, and said substrate to change relative positions of said substrate, said mask, and said layer material source from said first positional relationship to a second positional relationship; and

causing said material to attach to a second region of said substrate through said opening, while relative positions of said substrate, said mask, and said layer material source are set to said second positional relationship.

36. (New) A method according to claim 35, wherein

said layer material source is a linearly extending source elongated in a direction perpendicular to a direction of the relative movement between said mask and said layer material source, and said substrate.

37. (New) A method according to claim 36, wherein

said linearly extending source is formed by a plurality of layer material sources arranged adjacent to each other.

38. (New) A method according to claim 35, wherein

said layer is an electroluminescent layer formed between first and second electrodes, and

said layer material is an electroluminescent material.

YKI-0078  
09/966,692

39. (New) A method according to claim 38, wherein

said electroluminescent material is an organic material scattered from said layer material source by evaporation and attached to said substrate, thereby forming said electroluminescent layer.

40. (New) A method according to claim 35, wherein

a semiconductor material is used for said mask.

41. (New) A method according to claim 7, wherein

said layer material source is a linearly extending source elongated in a direction perpendicular to a direction of the relative movement between said mask and said layer material source, and said substrate.

42. (New) A method according to claim 41, wherein

said linearly extending source is formed by a plurality of layer material sources arranged adjacent to each other.

43. (New) A method according to claim 7, wherein

a semiconductor material is used for said mask.

YKI-0078  
09/966,692

44. (New) A manufacturing method of a color emissive device including, on a substrate, a self-emissive element having a first electrode, an emissive material layer for each color, and a second electrode, for each of a plurality of pixels, said method comprising the steps of:

disposing between said substrate and an emissive material source a mask including an opening at a position corresponding to a region for forming the emissive material layer of one or more of said plurality of pixels of said substrate;

causing an emissive material from said emissive material source to attach to a first region of said substrate through said mask, while relative positions of said substrate, said mask, and said layer material source are set to a first positional relationship;

sliding a relative position between said mask, said emissive material source, and said substrate by a predetermined pitch corresponding to a size of the pixel of said substrate to change relative positions of said substrate, said mask, and said layer material source from said first positional relationship to a second positional relationship; and

causing said emissive material to attach to a second region of said substrate through said opening, while relative positions of said substrate, said mask, and said layer material source are set to said second positional relationship.

45. (New) A manufacturing method of a color emissive device according to claim 44, wherein

said substrate is slid in two directions of said substrate perpendicular to each other by a pitch corresponding to an arrangement of said pixels for a same color.

46. (New) A manufacturing method of a color emissive device according to claim 44, wherein

said substrate is slid in one direction of said substrate by a pitch corresponding to an arrangement of said pixels for a same color.

YKI-0078  
09/966,692



47. (New) A manufacturing method of a color emissive device according to claim 44, wherein

said emissive material source is a linearly extending source elongated in a direction perpendicular to a direction of the relative movement between said mask and said emissive material source, and said substrate.

48. (New) A manufacturing method of a color emissive device according to claim 44, wherein

said linearly extending source is formed by a plurality of emissive material sources arranged adjacent to each other.

49. (New) A manufacturing method of a color emissive device according to claim 44, wherein

said self-emissive element is an electroluminescent element.

50. (New) A manufacturing method of a color emissive device according to claim 44, wherein

said emissive device is a display device for displaying an image with a plurality of pixels.

51. (New) A manufacturing method of a color emissive device according to claim 44, wherein

a semiconductor material is used for said mask.

52. (New) A method according to claim 35, further comprising forming said material scattered from said layer source on said substrate through said opening of said mask into a layer having a pattern according to a shape of said opening.

53. (New) A method according to claim 7, further comprising forming said material scattered from said layer source on said substrate through said opening of said mask into a layer having a pattern according to a shape of said opening.

YKI-0078  
09/966,692

54. (New) A manufacturing method of a color emissive device according to claim 44, further comprising forming said material scattered from said layer source on said substrate through said opening of said mask into a layer having a pattern according to a shape of said opening.

55. (New) A method of forming an individually patterned layer in a plurality of regions of a substrate, comprising the steps of:

disposing between said substrate and a layer material source a mask including an opening corresponding to one or more of said plurality of regions where said layer is formed;

causing a material from said layer material source to attach to a first region of said substrate through said opening, while at least relative positions of said substrate and said mask are set to a first positional relationship;

causing relative movement between at least said mask and said substrate to change relative positions of at least said substrate and said mask from said first positional relationship to a second positional relationship; and

causing said material to attach to a second region of said substrate through said opening, while relative positions of at least said substrate and said mask are set to said second positional relationship.

YKJ-0078  
09/966,692

56. (New) A manufacturing method of a color emissive device including, on a substrate, a self-emissive element having a first electrode, an emissive material layer for each color, and a second electrode, for each of a plurality of pixels, said method comprising the steps of:

disposing between said substrate and an emissive material source a mask including an opening at a position corresponding to a region for forming the emissive material layer of one or more of said plurality of pixels of said substrate;

causing an emissive material from said emissive material source to attach to a first region of said substrate through said mask, while relative positions of at least said substrate and said mask are set to a first positional relationship;

sliding a relative position of at least said mask and said substrate by a predetermined pitch corresponding to a size of the pixel of said substrate to change relative positions of at least said substrate and said mask from said first positional relationship to a second positional relationship; and

causing said emissive material to attach to a second region of said substrate through said opening, while relative positions of at least said substrate and said mask are set to said second positional relationship.

57. (New) A method of forming an individually patterned layer in a plurality of regions of a substrate, comprising the steps of:

disposing between said substrate and a layer material source a mask including an opening corresponding to one or more of the plurality of regions where said layer is formed; and

causing relative movement between said mask and said layer material source, and said substrate, and causing a material scattered from said layer material source to attach to said substrate through said opening, thereby forming said individually patterned layer, and wherein said individually patterned layer made of said material is formed in pixels at different positions on said substrate using said mask.

YKI-0078  
09/966,692

58. (New) A method of forming an individually patterned layer in a plurality of regions of a substrate, comprising the steps of:

disposing between said substrate and a layer material source a mask having a smaller area than said substrate and including an opening corresponding to one or more of the plurality of regions where said layer is formed;

causing a material from said layer material source to attach to a first region of said substrate through said opening, while relative positions of said substrate, said mask, and said layer material source are set to a first positional relationship;

causing relative movement between said mask and said layer material source, and said substrate to change relative positions of said substrate, said mask, and said layer material source from said first positional relationship to a second positional relationship; and

causing said material to attach to a second region of said substrate through said opening, while relative positions of said substrate, said mask, and said layer material source are set to said second positional relationship, and wherein said individually patterned layer made of said material is formed in pixels at different positions on said substrate using said mask.

YKI-0078  
09/966,692

59. (New) A manufacturing method of a color emissive device including, on a substrate, a self-emissive element having a first electrode, an emissive material layer for each color, and a second electrode, for each of a plurality of pixels, said method comprising the steps of:

disposing between said substrate and an emissive material source a mask including an opening at a position corresponding to a region for forming the emissive material layer of one or more of said plurality of pixels of said substrate;

causing an emissive material from said emissive material source to attach to a first region of said substrate through said mask, while relative positions of said substrate, said mask, and said layer material source are set to a first positional relationship;

sliding a relative position between said mask, said emissive material source, and said substrate by a predetermined pitch corresponding to a size of the pixel of said substrate to change relative positions of said substrate, said mask, and said layer material source from said first positional relationship to a second positional relationship; and

causing said emissive material to attach to a second region of said substrate through said opening, while relative positions of said substrate, said mask, and said layer material source are set to said second positional relationship, and wherein said emissive layer of said emissive material is formed in at least two pixels which are at different positions on the substrate and which are associated with a same color using the mask.

YKI-0078  
09/966,692

60. (New) A manufacturing method of a color emissive device including, on a substrate, a self-emissive element having a first electrode, an emissive material layer for each color, and a second electrode, for each of a plurality of pixels, said method comprising the steps of:

disposing between said substrate and an emissive material source a mask including an opening at a position corresponding to a region for forming the emissive material layer of one or more of said plurality of pixels of said substrate, and having a smaller area than said substrate to cover one or more of said plurality of pixels on said substrate;

causing an emissive material from said emissive material source to attach to a first region of said substrate through said mask, while relative positions of said substrate, said mask, and said layer material source are set to a first positional relationship;

sliding a relative position between said mask, said emissive material source, and said substrate by a predetermined pitch corresponding to a size of the pixel of said substrate to change relative positions of said substrate, said mask, and said layer material source from said first positional relationship to a second positional relationship; and

causing said emissive material to attach to a second region of said substrate through said opening, while relative positions of said substrate, said mask, and said layer material source are set to said second positional relationship, and wherein said emissive layer of said emissive material is formed in at least two pixels which are at different positions on the substrate and which are associated with a same color using the mask.

YKI-0078  
09/966,692

61. (New) A manufacturing method of a display device including, on a substrate, a self-emissive element having a first electrode, an emissive material layer for each color, and a second electrode, for each of a plurality of pixels, said method comprising the steps of:

disposing between said substrate and an emissive material source a mask including an individual opening for each pixel corresponding to a region for forming the emissive material layer individually patterned for each of said plurality of pixels; and

sliding a relative position between said emissive material source and said substrate and causing an emissive material to attach to a predetermined region of said substrate through the opening of said mask, thereby forming the emissive material layer, and wherein said emissive layer of said emissive material is formed in at least two pixels which are at different positions on the substrate and which are associated with a same color using the mask.

62. (New) A method of forming an individually patterned layer in a plurality of regions of a substrate, comprising the steps of:

disposing between said substrate and a layer material source a mask including an opening corresponding to one or more of the plurality of regions where said layer is formed; and

causing relative movement between said mask and said layer material source, and said substrate, and causing a material scattered from said layer material source to attach to said substrate through said opening, thereby forming said individually patterned layer and wherein said mask is placed on a mask support and a region of said glass substrate not covered by said mask is covered by said mask support.

YKI-0078  
09/966,692

63. (New) A method of forming an individually patterned layer in a plurality of regions of a substrate, comprising the steps of:

disposing between said substrate and a layer material source a mask having a smaller area than said substrate and including an opening corresponding to one or more of the plurality of regions where said layer is formed;

causing a material from said layer material source to attach to a first region of said substrate through said opening, while relative positions of said substrate, said mask, and said layer material source are set to a first positional relationship;

causing relative movement between said mask and said layer material source, and said substrate to change relative positions of said substrate, said mask, and said layer material source from said first positional relationship to a second positional relationship; and

causing said material to attach to a second region of said substrate through said opening, while relative positions of said substrate, said mask, and said layer material source are set to said second positional relationship and wherein said mask is placed on a mask support and a region of said glass substrate not covered by said mask is covered by said mask support.

YKI-0078  
09/966,692



64. (New) A manufacturing method of a color emissive device including, on a substrate, a self-emissive element having a first electrode, an emissive material layer for each color, and a second electrode, for each of a plurality of pixels, said method comprising the steps of:

disposing between said substrate and an emissive material source a mask including an opening at a position corresponding to a region for forming the emissive material layer of one or more of said plurality of pixels of said substrate;

causing an emissive material from said emissive material source to attach to a first region of said substrate through said mask, while relative positions of said substrate, said mask, and said layer material source are set to a first positional relationship;

sliding a relative position between said mask, said emissive material source, and said substrate by a predetermined pitch corresponding to a size of the pixel of said substrate to change relative positions of said substrate, said mask, and said layer material source from said first positional relationship to a second positional relationship; and

causing said emissive material to attach to a second region of said substrate through said opening, while relative positions of said substrate, said mask, and said layer material source are set to said second positional relationship and wherein said mask is placed on a mask support and a region of said glass substrate not covered by said mask is covered by said mask support.

YKI-0078  
09/966,692

65. (New) A manufacturing method of a color emissive device including, on a substrate, a self-emissive element having a first electrode, an emissive material layer for each color, and a second electrode, for each of a plurality of pixels, said method comprising the steps of:

disposing between said substrate and an emissive material source a mask including an opening at a position corresponding to a region for forming the emissive material layer of one or more of said plurality of pixels of said substrate, and having a smaller area than said substrate to cover one or more of said plurality of pixels on said substrate;

causing an emissive material from said emissive material source to attach to a first region of said substrate through said mask, while relative positions of said substrate, said mask, and said layer material source are set to a first positional relationship;

sliding a relative position between said mask, said emissive material source, and said substrate by a predetermined pitch corresponding to a size of the pixel of said substrate to change relative positions of said substrate, said mask, and said layer material source from said first positional relationship to a second positional relationship; and

causing said emissive material to attach to a second region of said substrate through said opening, while relative positions of said substrate, said mask, and said layer material source are set to said second positional relationship and wherein said mask is placed on a mask support and a region of said glass substrate not covered by said mask is covered by said mask support.

YKI-0078  
09/966,692

66. (New) A manufacturing method of a display device including, on a substrate, a self-emissive element having a first electrode, an emissive material layer for each color, and a second electrode, for each of a plurality of pixels, said method comprising the steps of:

disposing between said substrate and an emissive material source a mask including an individual opening for each pixel corresponding to a region for forming the emissive material layer individually patterned for each of said plurality of pixels;

sliding a relative position between said emissive material source and said substrate and causing an emissive material to attach to a predetermined region of said substrate through the opening of said mask, thereby forming the emissive material layer and wherein said mask is placed on a mask support and a region of said glass substrate not covered by said mask is covered by said mask support.

67. (New) A method of forming an individually patterned layer in a plurality of regions of a substrate, comprising the steps of:

disposing between said substrate and a layer material source a mask including an opening corresponding to one or more of the plurality of regions where said layer is formed; and

causing relative movement between said mask and said layer material source, and said substrate, and causing a material scattered from said layer material source to attach to said substrate through said opening, thereby forming said individually patterned layer and wherein said substrate and a set of said mask and said material source are moved relative to each other.

YKI-0078  
09/966,692

68. (New) A method of forming an individually patterned layer in a plurality of regions of a substrate, comprising the steps of:

disposing between said substrate and a layer material source a mask having a smaller area than said substrate and including an opening corresponding to one or more of the plurality of regions where said layer is formed;

causing a material from said layer material source to attach to a first region of said substrate through said opening, while relative positions of said substrate, said mask, and said layer material source are set to a first positional relationship;

causing relative movement between said mask and said layer material source, and said substrate to change relative positions of said substrate, said mask, and said layer material source from said first positional relationship to a second positional relationship; and

causing said material to attach to a second region of said substrate through said opening, while relative positions of said substrate, said mask, and said layer material source are set to said second positional relationship and wherein said substrate and a set of said mask and said material source are moved relative to each other.

YKI-0078  
09/966,692

69. (New) A manufacturing method of a color emissive device including, on a substrate, a self-emissive element having a first electrode, an emissive material layer for each color, and a second electrode, for each of a plurality of pixels, said method comprising the steps of:

disposing between said substrate and an emissive material source a mask including an opening at a position corresponding to a region for forming the emissive material layer of one or more of said plurality of pixels of said substrate;

causing an emissive material from said emissive material source to attach to a first region of said substrate through said mask, while relative positions of said substrate, said mask, and said layer material source are set to a first positional relationship;

sliding a relative position between said mask, said emissive material source, and said substrate by a predetermined pitch corresponding to a size of the pixel of said substrate to change relative positions of said substrate, said mask, and said layer material source from said first positional relationship to a second positional relationship; and

causing said emissive material to attach to a second region of said substrate through said opening, while relative positions of said substrate, said mask, and said layer material source are set to said second positional relationship and wherein said substrate and a set of said mask and said material source are moved relative to each other.

YKI-0078  
09/966,692

70. (New) A manufacturing method of a color emissive device including, on a substrate, a self-emissive element having a first electrode, an emissive material layer for each color, and a second electrode, for each of a plurality of pixels, said method comprising the steps of:

disposing between said substrate and an emissive material source a mask including an opening at a position corresponding to a region for forming the emissive material layer of one or more of said plurality of pixels of said substrate, and having a smaller area than said substrate to cover one or more of said plurality of pixels on said substrate;

causing an emissive material from said emissive material source to attach to a first region of said substrate through said mask, while relative positions of said substrate, said mask, and said layer material source are set to a first positional relationship;

sliding a relative position between said mask, said emissive material source, and said substrate by a predetermined pitch corresponding to a size of the pixel of said substrate to change relative positions of said substrate, said mask, and said layer material source from said first positional relationship to a second positional relationship; and

causing said emissive material to attach to a second region of said substrate through said opening, while relative positions of said substrate, said mask, and said layer material source are set to said second positional relationship and wherein said substrate and a set of said mask and said material source are moved relative to each other.

YKI-0078  
09/966,692

71. (New) A manufacturing method of a display device including, on a substrate, a self-emissive element having a first electrode, an emissive material layer for each color, and a second electrode, for each of a plurality of pixels, said method comprising the steps of:

disposing between said substrate and an emissive material source a mask including an individual opening for each pixel corresponding to a region for forming the emissive material layer individually patterned for each of said plurality of pixels; and

sliding a relative position between said emissive material source and said substrate and causing an emissive material to attach to a predetermined region of said substrate through the opening of said mask, thereby forming the emissive material layer and wherein said substrate and a set of said mask and said material source are moved relative to each other.

YKI-0078  
09/966,692